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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

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*NOT ADMITTED TO THE BAR
**ADMITTED IN PENNSYLVANIA ONLY

June 18, 1993

Ms. Donna R. Searcy
Secretary
Federal Communications Commission
1919 M Street, NW
Room 222
Washington, D.C. 20554

Re: AM Stereo (Dkt. No. 92-298) --
Ex parte presentation

Dear Madam Secretary:

Please be advised pursuant to Section 1.1206 of the Rules that Mr. Kahn and the undersigned met with Dr. Stanley and members of his staff, with John C. Hollar, Senior Legal Advisor to Commissioner Duggan, and with James R. Coltharp, Mass Media Advisor to Commissioner Barrett, concerning issues raised in Mr. Kahn's comments and reply comments in this proceeding.

Mr. Kahn left at OCE demonstration audio cassettes and copies of the attached memorandum. Two copies of the cassette and of the memorandum are being filed with this letter.

Respectfully submitted,


William Malone

Attorney for
Leonard R. Kahn

WM:bym
Enclosures
cc: Michael A. Menius, Esquire

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

JUN 18 1993

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In re)	
)	
Amendment of the Commission's)	ET Docket No.
Rules to Establish a Single)	92-298
AM Radio Stereophonic)	
Transmitting Equipment Standard)	June 18, 1993 Comments of
)	<u>Leonard R. Kahn</u>
)	

INTRODUCTION

The following is a summary of the presentation of Leonard R. Kahn ("Kahn") that took place on June 18, 1993. This was the first and only meeting between the FCC staff and Kahn or any officer or employee of Kahn Communications, Inc. ("KCI") concerning AM Stereo since the initial notice of the subject docket. A copy of this document and its exhibits and the submitted "cassette" audio recording are being mailed to Motorola, Inc. this day.

POINTS MADE BY KAHN AT JUNE 18th MEETING

Kahn opposed the adoption of the Motorola system for stereophonic AM broadcast service in view of the system's serious deficiencies and because its adoption would violate FCC rules.

I. The Commission's Staff has Uncritically Adopted False and Misleading Statistics from Motorola, Kahn's Competitor, thus Ignoring Motorola's Failure in the Free Marketplace

The Motorola system has not, as stated in the NPRM, proven itself to be a winner in the AM Stereo marketplace, but rather a system that broadcasters throughout the world have found deficient and unacceptable.

Even if the figures Motorola supplied (and the Commission used uncritically) were accurate, 87.8% of the AM stations in the United States have, after being the target of the most expensive marketing campaign ever directed towards broadcasters, resoundingly said "no"

to the Motorola system! Nothing should be clearer to the

Kahn offered to submit documents signed by Motorola officers supporting a finding of violations of the Sherman Act.³

III. WHY THE MOTOROLA SYSTEM HAS FAILED IN THE MARKETPLACE EVEN GIVEN ITS HUGE TEN YEAR OLD SALES CAMPAIGN

Given the fact that Motorola targeted AM broadcasters with the most expensive sales campaign ever directed at TV, AM or FM broadcasters, an explanation for its failure is in order.⁴

a) Platform Motion. At night the Motorola system is subject to a basic defect. The stereo image drifts from the left loudspeaker to the right loudspeaker, back and forth.⁵ (This effect is so disturbing that there have even been reports of listeners becoming nauseous. The submitted cassette recording demonstrates 50 kw stations subject to platform motion.)

b) Loss of Coverage. Stations using the Motorola system suffer significant monophonic as well as stereophonic coverage loss

³Kahn once again proffered a confidential exhibit treating such subject matter with the proviso that it not be made public as these allegations are now being litigated in the Federal Courts and a number of documents providing supporting evidence are subject to confidentiality orders of the courts. Of course any such report would be served on Motorola, Inc. so they will have full opportunity to respond.

⁴Further proof of Motorola's failure to satisfy AM stations is provided in a Department of Commerce Report dated February 1987, (Exh. 1 to Kahn Comments). The reported industry wide poll shows the ISB system was clearly preferred on a technical basis over the Motorola system.

⁵The physical basis for this fatal flaw is that the Motorola system is a "phase separation" system and which is subject to phase anomalies such as created by even small amounts of co-channel interference and self sky wave/ground wave interference which is particularly severe for operation over 1,000 Khz, such as in the new expanded band. Indeed, it is the undersigned's professional opinion that listening tests will prove that the Motorola system will be unusable for expanded band operation.

under full stereo operation. (One reason for this defect is the excessive bandwidth of the Motorola signal, treated next.)

c) Increased Interference. Most importantly, the Motorola system's wide bandwidth increases interference to neighboring adjacent channel stations under full stereo modulation.

This interference to adjacent channels defect is a most important matter that deserves the full attention of the Commission. The Commission has on file comments from stations all over the country complaining about Motorola's spectrum characteristic.⁶ And, most importantly, KCI furnished actual measurements of Motorola stereo exciters clearly showing that they violated the then current FCC Occupied Bandwidth Rules.

The Commission subsequently modified (dramatically eased) the Occupied Bandwidth Specifications and even authorized subjective tests that almost any AM Stereo system can pass.

IV. RECOMMENDATIONS OF NTIA AND/OR NIST

The Commission has, over the years, repeatedly stated that it does not have the scientific and technical personnel available to properly evaluate the complex issues of AM Stereo. NIST (formerly National Bureau of Standards) and NTIA do.

⁶See Complaint filed by Kahn Communications Inc. on March 14, 1985. Please see the comments filed with the FCC from leading broadcasters in this docket and also in Docket # 21313 that lead to the adoption of AM Stereo standard in 1982. Especially important in the KCI filing is the actual spectrum photograph with only 75% modulation at 10 Khz which fails to meet FCC Rule 73.44. On the other hand KCI equipment passed all such tests at even +125% modulation! Also see the comment of the Harris Corporation that "the Motorola system grossly exceed the Commission standards." Subsequently FCC rules were changed.

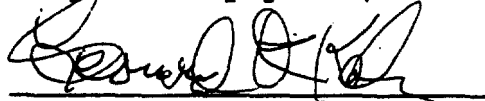
Therefore, Kahn respectfully recommended that, in view of the urgency and importance of this matter the Commission seek additional funds to task NIST and/or NTIA to perform a rush but careful evaluation of the Kahn and Motorola systems. These groups can also confirm the compatibility of the Kahn system with medium speed digital keying as tested by Bonneville International over the air at KSL and the incompatibility of the Motorola system with such new systems.

V. MOST IMPORTANTLY: A WIN-WIN SOLUTION

The most important part of the presentation covers a detailed description of a solution that provides advantages to all AM stations including of course broadcasters that have invested in AM stereo equipment including Motorola and Kahn equipment. This proposal, which was originally disclosed in Kahn's Reply Comments, is further described in Attachment A.

Dated: June 18, 1993

Respectfully yours,



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ATTACHMENT A

A "WIN-WIN" AM STEREO SOLUTION

There is a solution to the AM Stereo problem that will accommodate all broadcasters who have invested in either Kahn or Motorola exciters. And most importantly this solution will rekindle interest in AM radio and allow it to successfully compete with FM in the car and at the beach now and well into the next century. Thus, for all AM broadcasters and the public they serve there is a "win-win" solution to the AM Stereo problem.

This solution is based on an engineering fact that only those who have practical "hands on" AM Stereo experience know about. The secret is that under good listening conditions not only do all of the AM Stereo systems sound superb, but they sound superb with the **WRONG RECEIVERS!**

Thus, if you listen to the attached cassette, you will find it

But what will Motorola stations penalties be?

- a) Their stereo imaging will be degraded, but your listening tests of the cassette prove that only purists will reject such sound. And their listeners will be delighted to hear stereo without platform motion and the stereo switching on and off; and
- b) They will still suffer from loss of mono coverage due to the excessive bandwidth of the Motorola signal. But at least they can plan to convert to the Kahn system and recoup that loss rather than suffering a permanent disability.

Thus, Motorola-equipped stations will actually be better off than they are now and many will probably turn their stereo equipment back on. Also, their poor mono performance will give them an incentive to comply with the switch to narrowband Kahn type transmission as the widebandwidth of the Motorola signal is the reason for the mono problem.

Thus, with the advent of Kahn type sideband receivers the few hundred Motorola users (and those 500 or so owners but not full time users of such equipment) will be able to enjoy, full-time, platform-free operation. This will not only allow them to serve more of their listeners, but it will allow their adjacent channel neighbors to get relief from their excessive splatter, letting these innocent parties also serve more listeners.

[The necessary equipment to convert their exciters will be substantially less than their investment in stereo. Kahn Communications, Inc. will offer conversion kits to such stations and, indeed, provide other manufacturers design licenses to market such kits.]

optimum type receiver for linear ISB stereo reception.

Such receivers cannot be implemented with the Motorola system because of excessive odd harmonic distortion. Whereas with the Kahn ISB system only even order distortion is detected, which is the natural distortion of the human ear. Indeed, such "distortion" is used in recording and broadcasting to enhance sound.

Thus, this is truly a "win-win" solution for all AM stations.⁸

Dated: June 18, 1993

⁸Including stations with "problem" antennas that cannot be used with the Motorola system. Such stations are generally low on the dial with severe protection requirements that cannot be "broadbanded" by conventional means without losing significant amounts of effective radiated power. Kahn Communications' "Flatterer™" can be used to ease such problems, but it is not an inexpensive device.

DOCUMENT OFF-LINE

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2 Audio Tapes for 92-298.